

IN THE CLAIMS:

Please note that all claims currently pending and under consideration in the above-referenced application are shown below. This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently amended) A chip-scale package, comprising:
a semiconductor device including an active surface; and
a substrate comprising a semiconductor material disposed adjacent ~~said~~ the active surface and including:
at least one electrically conductive via extending at least partially therethrough,
positioned over ~~said~~ the semiconductor device, and in communication with a
corresponding bond pad of ~~said~~ the semiconductor device; and
at least one conductive trace in communication with ~~said~~ the at least one electrically
conductive via and carried on a surface of ~~said~~ the substrate which is opposite
from another surface of ~~said~~ the substrate that is adjacent to ~~said~~ the
semiconductor device.
2. (Currently amended) The chip-scale package of claim 1, further comprising an
electrically conductive bump protruding from ~~said~~ the substrate opposite ~~said~~ the semiconductor
device ~~and~~, in communication with ~~said~~ the at least one electrically conductive via, and located at
an opposite end of the at least one conductive trace from the at least one electrically conductive
via.

3. (Currently amended) The chip-scale package of claim 1, wherein ~~said~~ the substrate comprises at least another electrically conductive via that extends substantially directly therethrough.

4. (Canceled)

5. (Currently amended) The chip-scale package of claim 1, wherein a substrate of ~~said~~ the semiconductor device and ~~said~~ the substrate comprising semiconductor material comprise the same type of semiconductor material.

6. (Currently amended) The chip-scale package of claim 1, wherein a substrate of ~~said~~ the semiconductor device and ~~said~~ the substrate comprising semiconductor material comprise materials having substantially the same coefficients of thermal expansion.

7. (Currently amended) The chip-scale package of claim 1, wherein a substrate of ~~said~~ the semiconductor device comprises silicon.

8. (Currently amended) The chip-scale package of claim 1, wherein ~~said~~ the semiconductor material comprises silicon.

9. (Currently amended) The chip-scale package of claim 1, wherein a first thickness of ~~said~~ the semiconductor device and a second thickness of ~~said~~ the substrate are substantially the same.

10. (Currently amended) The chip-scale package of claim 1, wherein a first thickness of ~~said~~ the semiconductor device is greater than a second thickness of ~~said~~ the substrate.

11. (Currently amended) The chip-scale package of claim 1, wherein ~~said~~ the another surface of ~~said~~ the substrate is at least partially coated with an insulative material.

12. (Currently amended) The chip-scale package of claim 11, wherein ~~said~~ the insulative material comprises a layer extending substantially over ~~said~~ the surface.

13. (Currently amended) The chip-scale package of claim 11, wherein ~~said~~ the insulative material comprises an oxide.

14. (Currently amended) The chip-scale package of claim 11, wherein ~~said~~ the insulative material comprises silicon oxide.

15. (Currently amended) The chip-scale package of claim 1, further comprising an intermediate layer disposed between ~~said~~ the semiconductor device and ~~said~~ the substrate.

16. (Currently amended) The chip-scale package of claim 15, wherein ~~said~~ the intermediate layer comprises an adhesive material.

17. (Currently amended) The chip-scale package of claim 15, wherein ~~said~~ the intermediate layer comprises polyimide.

18. (Currently amended) The chip-scale package of claim 15, wherein ~~said~~ the at least one electrically conductive via and ~~said~~ the corresponding bond pad communicate through ~~said~~ the intermediate layer.

19. (Currently amended) The chip-scale package of claim 1, wherein conductive material of ~~said~~ the at least one electrically conductive via is bonded to ~~said~~ the corresponding bond pad.

20. (Currently amended) The chip-scale package of claim 1, wherein a contact between ~~said~~ the at least one electrically conductive via and ~~said~~ the corresponding bond pad comprises a diffusion region comprising a bond pad material and a via material.

21. (Currently amended) A chip-scale package, comprising:
a substrate comprising semiconductor material and including:
a first surface with contact areas arranged correspondingly to an arrangement of bond pads on an active surface of a semiconductor device of the chip-scale package;
conductive vias extending therethrough and corresponding to ~~said~~ the contact areas; and
a second surface carrying at least one conductive trace extending laterally from a conductive via of ~~said~~ the conductive vias; and
~~said~~ the semiconductor device invertedly disposed adjacent ~~said~~ the substrate so that bond pads of ~~said~~ the semiconductor device communicate ~~through~~ with corresponding conductive vias of ~~said~~ the substrate.

22. (Currently amended) The chip-scale package of claim 21, wherein ~~said~~ the bond pads contact ~~said~~ the corresponding conductive vias.

23. (Currently amended) The chip-scale package of claim 22, further comprising diffusion regions between ~~said~~ the bond pads and ~~said~~ the corresponding conductive vias.

24. (Currently amended) The chip-scale package of claim 23, wherein each of ~~said~~ the diffusion regions comprises a bond pad material and a via material.

25. (Currently amended) The chip-scale package of claim 24, wherein ~~said~~ the diffusion regions at least partially secure ~~said~~ the semiconductor device to ~~said~~ the substrate.

26. (Currently amended) The chip-scale package of claim 21, further comprising an intermediate layer disposed between ~~said~~ the substrate and ~~said~~ the semiconductor device.

27. (Currently amended) The chip-scale package of claim 26, wherein ~~said~~ the bond pads and ~~said~~ the corresponding vias contact each other through ~~said~~ the intermediate layer.

28. (Currently amended) The chip-scale package of claim 26, wherein ~~said~~ the intermediate layer comprises a material which adheres ~~said~~ the semiconductor device to ~~said~~ the substrate.

29. (Currently amended) The chip-scale package of claim 26, wherein ~~said~~ the intermediate layer comprises a polyimide.

30. (Currently amended) The chip-scale package of claim 21, further comprising at least one conductive bump in communication with at least one conductive via of ~~said~~ the corresponding conductive vias ~~and~~, protruding from ~~said~~ the substrate opposite from ~~said~~ the semiconductor device, and located at an opposite end of the at least one conductive trace from the at least one conductive via.

31. (Currently amended) The chip-scale package of claim 30, wherein ~~said~~ the at least one conductive bump comprises solder.

32. (Currently amended) The chip-scale package of claim 21, wherein ~~said~~ the substrate comprising semiconductor material and a substrate of ~~said~~ the semiconductor device comprise the same material.

33. (Currently amended) The chip-scale package of claim 21, wherein ~~said~~ the substrate comprises silicon.

34. (Currently amended) The chip-scale package of claim 21, wherein a substrate of ~~said~~ the semiconductor device comprises silicon.

35. (Currently amended) The chip-scale package of claim 21, wherein a first thickness of ~~said~~ the substrate and a second thickness of ~~said~~ the semiconductor device are substantially equal.

36. (Currently amended) The chip-scale package of claim 21, wherein a first thickness of ~~said~~ the substrate is less than a second thickness of ~~said~~ the semiconductor device.

37. (Currently amended) The chip-scale package of claim 21, further comprising an insulative material disposed on at least a portion of ~~said~~ the second surface of ~~said~~ the substrate.

38. (Currently amended) The chip-scale package of claim 37, wherein at least one conductive via of ~~said~~ the corresponding conductive vias is exposed through ~~said~~ the insulative material.

39. (Currently amended) The chip-scale package of claim 37, wherein ~~said~~ the insulative material comprises an oxide.

40. (Currently amended) The chip-scale package of claim 37, wherein ~~said~~ the insulative material comprises silicon oxide.

41. (Currently amended) The chip-scale package of claim 37, wherein ~~said~~ the insulative material comprises an insulative layer disposed substantially over ~~said~~ the second surface.

42. (Canceled)

43. (Currently amended) A flip-chip carrier, comprising a substrate comprising semiconductor material and including:

at least one via formed therethrough and having a first end located proximate a first surface of ~~said~~ the substrate and positioned to substantially align with a corresponding bond pad of a semiconductor device to be assembled with ~~said~~ the substrate; and

at least one conductive trace laterally extending from a second end of ~~said~~ the at least one via and carried by a second surface of ~~said~~ the substrate.

44. (Currently amended) The flip-chip carrier of claim 43, wherein ~~said~~ the at least one via comprises an electrically conductive material.

45. (Currently amended) The flip-chip carrier of claim 43, further comprising an insulative material disposed on at least a portion of at least one surface of ~~said~~ the substrate.

46. (Currently amended) The flip-chip carrier of claim 45, wherein ~~said~~ the insulative material comprises an oxide.

47. (Currently amended) The flip-chip carrier of claim 45, wherein ~~said~~ the insulative material comprises silicon oxide.

48. (Currently amended) The flip-chip carrier of claim 45, wherein ~~said~~ the insulative material comprises an insulative layer disposed substantially over ~~said~~ the at least one surface.

49. (Currently amended) The flip-chip carrier of claim 45, wherein ~~said~~ the at least one via is exposed through ~~said~~ the insulative material.

50. (Currently amended) The flip-chip carrier of claim 43, wherein ~~said~~ the substrate comprises silicon.

51. (Currently amended) The flip-chip carrier of claim 43, further comprising a conductive bump disposed adjacent an end of ~~said~~ the at least one conductive trace located opposite from ~~said~~ the second end of ~~said~~ the at least one via.

52. (Currently amended) The flip-chip carrier of claim 51, wherein ~~said~~ the conductive bump comprises solder.

53. (Currently amended) The flip-chip carrier of claim 43, further comprising an adhesive layer disposed adjacent ~~said~~ the first surface of ~~said~~ the substrate.

54. (Currently amended) The flip-chip carrier of claim 53, wherein ~~said~~ the adhesive layer comprises a polyimide.

55. (Currently amended) The flip-chip carrier of claim 53, wherein ~~said~~ the first end of ~~said~~ the at least one via extends through ~~said~~ the adhesive layer.

56-72. (Canceled)